Ontario Science Centre / Annual Report 1985/86

# Ontario Science Centre /Annual Report 1985/86

87-01843/

**Annual Report**

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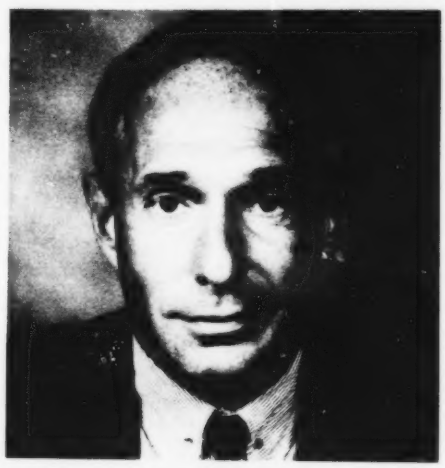
# Chairman's Report

March 31, 1986

The Honourable Lily Munro, Ph.D.
Minister of Citizenship & Culture
77 Bloor St., West
Toronto, Ontario
M7A 2R9

Dear Minister:



It was a very great honour to become Chairman of the Ontario Science Centre. This unique institution offers a fascinating combination of education through entertainment, learning through recreation and experience through our numerous hands-on displays, models and activities. The Centre offers excitement, learning and fun for young and old and every age in between; for people from all walks of life, with much or little educational or scientific background; for people of different interests and inclinations. Originally planned as a showcase for hands-on science and technology for Ontario, it grew into a world-class institution.

The Science Centre has been and can continue to be a jewel in the crown of Ontario, and I am excited to be its Chairman of the Board. Since so much of the Centre is geared to what our future lives will be like, I have spent a great deal of time thinking about what our Centre's future should be like. I have a vision of how the Ontario Science Centre should be taken into the 21st century.

We must continue to ensure that the Ontario Science Centre remains a world-class institution. In recent years, the Centre suffered greatly because it did not have the means to fulfill its potential. Because of lack of staff and funds many of the opportunities to expand at home and abroad had to be either delayed or cancelled. The Centre's travelling exhibitions, for example the Science Circus and the Seeing Brain, could and should play an increasingly important role in a world dominated by rapid advances in science, technology and innovations.

In order to continue to champion standards of excellence, I made a case to you, the Premier and the Chairman of Management Board, so that you would be aware that the Ontario Science Centre would fall behind and lose its international status if something drastic were not done. Fortunately, all of you joined in and encouraged me to apply for the funds that would make all our dreams for a better Centre a reality.*

A number of projects were successfully launched during this fiscal year in which the Trustees played a prominent role. These events included the hosting of a seminar of the prestigious American Museums Trustees' annual conference, and the opening of our totally renovated and updated Hall of Technology, and most recently the official opening of the long awaited and exceptionally well received FOOD show.

With Premier David Peterson and other dignitaries in attendance, the FOOD show opened to become an instant hit. Its continuing success is proved by the constant stream of visitors eager to both learn from and participate in the vast scope of wonder, fascination, education and entertainment it presents.

These events and the ongoing work steadily contribute to the continued growth and development of our unique Centre.

I am extremely impressed with the Centre's staff. There is talent and skill, there is knowledge and creativity, there is dedication and devotion, there is a vision for the future of the Centre and there is love galore for the Science Centre. It was unfortunate to see them have to operate in tired, neglected and outdated facilities, with inappropriate operating budgets and too little support staff.

It is also a pleasure to work with a Board of Trustees whose members, new and old, are bursting with enthusiasm. Their backgrounds embrace such a wide variety of talents in business, academics, and culture, that we will be able to harness their skills and acumen to advance the Centre's activities in this era of rapid and wondrous technological change. We were pleased to have four new Trustees recently appointed to the Board and I look forward to the contribution they will make to the Centre. The four new Trustees are Dr. Elie Cass, Mrs. Patricia Gray, Mr. Kenneth C. McGowen and Dr. David T. Suzuki.

Allow me, Minister, to pay tribute to my predecessor, Dr. Harry C. Parrott, for his considerable achievements. Special recognition should be made of his negotiations regarding the status of the Centre whereby it received greater autonomy through a "Memorandum of Understanding." The Board of Trustees, essentially an advisory body, was transformed into a Board of Directors, with all the attendant responsibilities, and a regular financial reporting system was established.

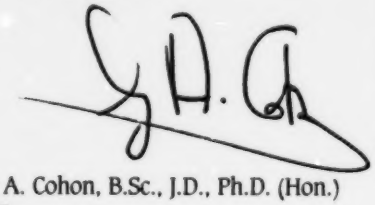
When Dr. Parrott resigned, Vice-Chairman Henry J. Sissons assumed the responsibilities of Acting Chairman with great ability. I was pleased, indeed, that his term was extended, as his services are greatly valued.

In conclusion, one of the major events in this fiscal year was the retirement of Director General, Dr. J. Tuzo Wilson. Without question, Dr. Wilson is one of Canada's most renowned international citizens, and enjoys a unique international reputation which has brought respect, recognition and world acclaim to our Centre. A very careful search was successfully

conducted to seek a worthy successor, and soon thereafter our new Director General, Dr. Jim Parr was welcomed. Dr. Parr has a Ph.D. in Metallurgical Engineering and came to us from TV Ontario where he demonstrated his administrative abilities as Chairman and Chief Executive Officer for many years. Under his direction, for the first time a Strategic Plan was submitted to the Board, which it received and approved. This plan is being carefully monitored, updated and reviewed from time to time.

Minister, I am pleased to witness and be part of the very beneficial relationships that exist between the Board and the Staff. As mentioned, I am excited to be Chairman of such a world-class institution and I shall do everything in my power to enhance its splendid reputation. It is a very great pleasure for me to submit to you this, my first Annual Report.

Respectfully submitted,



George A. Cohon, B.Sc., J.D., Ph.D. (Hon.)
Chairman

*P.S.

**Although, technically, the period of this Annual Report does not cover any items after March 31, 1986 I, nevertheless, have the following comment: we received the necessary funding that was requested, we're most happy and grateful!**

# Board of Trustees

Chairman George A. Cohon
APPOINTED 30.1.86

Andrée Brunelle

Dr. Elie Cass
APPOINTED 19.3.86

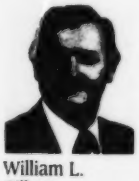
Leo Chan
APPOINTED 19.6.85

Keith D. Davidson

June Duff

Joyce Franceschini
APPOINTED 19.6.85

Edna Gardner



William L. Gilbert

Patricia Gray
APPOINTED 19.3.86

Gwen Van Hamme
TERM EXP. 31.3.86

Robert M. Hayden
TERM EXP. 31.3.86

Beverly Mascoll
APPOINTED 19.6.85

John Matheson

T. James Matthews

Dr. J. William McGowan

Kenneth McGowen
APPOINTED 19.3.86

Sam Meister

Ron C. Merriam
RESIGNED 14.6.85

Molly Nightingale

Chairman Dr. Harry C. Parrott
APPOINTED 10.11.83
RESIGNED 9.11.85

Irvin H. Sherman

Henry J. Sissons

Edward Sonshine

Dr. David T. Suzuki
APPOINTED 19.3.86

Richard H. Wotherspoon
TERM EXP. 31.3.86

Walter Yurechuk

# Director General's Report

As I acknowledge the honour of being appointed Director General of this wonderful place, I also acknowledge the fine work of my predecessor, Tuzo Wilson. His flair for internationalism expanded the boundaries of the scope of the Centre's successes.

I want, particularly, to thank everybody on the staff for welcoming me to the Centre. The cordiality of our relationship is important in two respects:

First, it makes work more enjoyable; second, when differences arise, they can be resolved as friends would resolve them.

As an example of the cordiality and spirit found throughout the Centre, I'd like to talk about the development of the New Strategic Plan. Now, a request to formulate a new strategic plan does not generate loud cheers in any organization. It requires a lot of work and the kind of self-analysis that consumes many hours.

When I arrived on May 1, I made developing a New Strategic Plan a primary goal. In terms of the Centre, this required us – all of us, full time and part time staff, and Trustees – to determine where we thought our world was headed, and then decide where we wanted to be in relationship to this future.

We started working on that plan on May 22, and actually had a draft approved by the Board of Directors less than three months later. The final plan was approved in November, 1985.

There are a number of reasons for having a Strategic Plan.

First, without one, it is highly unlikely that governments (or any funding source, for that matter) will take requests for funds seriously.

Second, the development of a plan gives one a sense of security in the future – however much the plan may be amended as the years tick by.

Third, you have a yardstick to measure achievement against. And, last, the process itself is a valuable exercise. It brings people together and gives them an opportunity to take the time to think about the future.

At an institution like the Centre – and I must admit that there aren't many like the Centre – whether or not the staff agrees or disagrees about emerging science and the effects of new technology is not what is most important. What is most important is that we present science and technology to the public, in the most entertaining, informative and understandable ways possible.

That we do.

As I close, and on behalf of the entire Centre staff, I want to thank our past chairman, Dr. Harry C. Parrott, for all that he so unstintingly gave. During the short time our appointments overlapped, I recognized the high regard in which he was held.

With equal enthusiasm, I share in the welcoming of our new chairman. His time-honoured greeting, "Hello! I'm George Cohon, I sell...," has already been modified to: "...I'm Chairman of the Ontario Science Centre."

George, we all share your pride!

Jim Parr.

Jim Parr, F.R.S.C.
Director General

## Facts and Figures

### Booking & Reception

The auditorium is used continually throughout the day for a number of Science Centre activities.

There are lectures for the Canadian school classes, O.S.C. films for the general public, Hollywood-type films every Wednesday for Senior Citizens and special guest lecturers.

In the evening the auditorium is rented to many different groups such as the East York Symphony, who hold their concert series at the Centre, also film and video companies releasing new films. Wednesday afternoon is Senior Citizen day when Hollywood-type films are screened for their pleasure.

The Ontario Film Theatre screenings and the CJRT Concerts are also held at the Centre.

The three lecture theatres, which are used daily during the school year for classes, were also used for special lectures for the public and are also rented to groups in the evening.

ATTENDANCE

| | |
|---|---|
| General admission | 762,872 |
| Canadian Students | 165,922 |
| Senior Citizens | 46,984 |
| Free | 17,541 |
| Total admissions 1985/86 | 993,319 |

### Roadshows

Toronto 50/ Outside of Toronto 44 Total 99

### Outreach

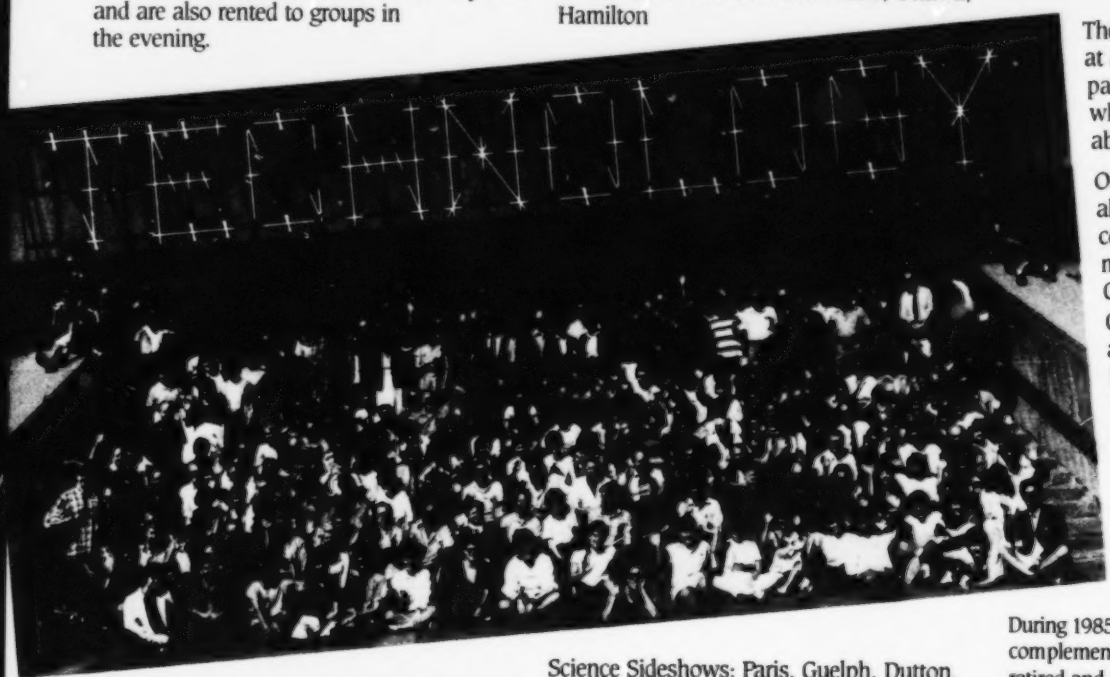
**April 1, 1985 to March 31, 1986**

Attendance: 263,400
16 communities were visited by Outreach.

Science Circus: Cornwall, 1000 Islands

Seeing Brain: Haileybury, London

Emett Machines: Sault Ste. Marie, Ottawa, Hamilton



There were a number of after hour tours of the exhibits with receptions. These are attended usually by a minimum of 400 guests and are usually rented by large corporations.

In total the facilities were rented 100 times.

The Centre was visited by 2184 tour groups (not counting school groups) totalling approximately 87,360 people. A total of 165,992 Canadian school children visited in class groups.

In addition 36,234 students from the United States visited in class groups.

Science Sideshows: Paris, Guelph, Dutton, Thorold, Elliot Lake, Terrace Bay, Timmins, Fergus, London

OPTICKLES: Sault Ste. Marie

Out of Province Events: Seeing Brain (Chicoutimi, P.Q.); Emett Machine (Binghamton, NY)

### Admission

Adults $3.00, Youth $2.00, Children $1.00, Family $7.00, Parking $1.00

### Hours

10 a.m. – 6 p.m. seven days a week
Closed December 25 only

## Science Centre Staff

Even though the Centre won't hold its 20th birthday party until 1989, 13 Centre staffers celebrated their 20th anniversary last year.

They are some of our founders, some of the people who helped create the Centre, nurtured it and helped it grow and develop into the most celebrated science centre in the world.

The 20-year veterans were honoured at a special staff recognition dinner party with the Board of Directors where they were presented with suitable mementoes.

Our 15, 10, and 5-year veterans were also honoured under the Staff Recognition Program, a program stemming from the Centre's 10-member Communications Committee. The Committee also helped inaugurate a new staff newsletter and launched an annual staff survey to solicit staff suggestions and to determine morale and attitudes.

During 1985/86 the Science Centre's official complement remained at 200. Seven people retired and three others left.

SCIENCE CENTRE STAFF

| | |
|---|---|
| Ministry of Citizenship and Culture | 186 |
| Ministry of Government Services, Property Management Branch | 30 |
| Modern Building Cleaners | 22 |
| Metro Parks Department | 7 |
| Multi Restaurants | 60 |
| Science City | 6 |

# EVENTS

# APR Calendar

## Nikon Photos

THROUGH APRIL

At the Nikon Small World Photomicrography Exhibition, our world was on display – as seen through the business end of a microscope.

## Medical Series

THROUGH APRIL

New medical technologies that are making our lives easier – and longer – were presented, explained and discussed during a regular series of Saturday programs. The sessions included THE COMPUTER AND THE BRAIN: TWO INTELLIGENT MACHINES, UNDERSTANDING CANCER: IMPACT OF NEW TECHNOLOGIES and DEAFNESS: A BIONIC SOLUTION.

## Science Stage

APRIL 14

SCIENCE STAGE presented SEEING IS BELIEVING? which looked closely at how we look closely, and at the perceptions and misconceptions that can result.

## Science Fair

APRIL 13-14

Metro Toronto's Science Fair, the city's largest annual gathering of the best projects by students in Grades 7-13. Among the winners this year were exhibits on making fabric out of fungus, the mathematics of music, cryptography and the relationship between left/right brain preference and learning.

## Looking at the Light

THROUGH APRIL

How do you get a good look at light? With lenses, mirrors and shadows, of course. This travelling show – a collection of hands-on exhibits from San Francisco's Exploratorium – filled the Laser Lobby.

## OPTICKLES

APRIL 1-8

OPTICKLES, OSC's newest travelling show, made its debut at the Science Centre. It's a display of a series of creatively confusing photographs by Gera Dillon which show ordinary objects in unordinary ways that challenge your ability to recognize them.

## Rabbits, rabbits everywhere

APRIL 20-21

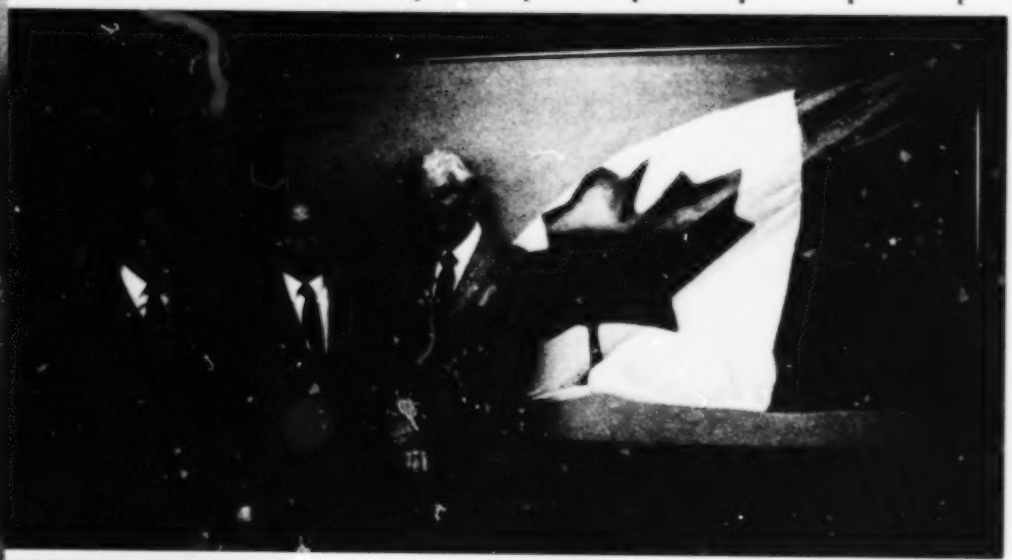
The International Rabbit Show, hosted by the Toronto Rabbit Club. Breeders

A work of art, a maze or a cross-section of red cabbage? One of the photos in OTICKLES to test your powers of perception.

An intent young scientist at the Metro Science Fair.

A few of the more than 1000 furry bunnies shown at the Toronto Rabbit Show.

The architects of the Canadian flag, the Honourable John Ross Matheson, Judge of District Court of Ontario and the Honourable George F.G. Stanley, Lieutenant Governor of New Brunswick, flank the artist of The Painted Flag, Charles Pachter.



It all depends on how you look at it in LOOKING AT THE LIGHT.

from around the world brought more than 1000 bunnies ranging from soft fuzzy angoras to brightly coloured Netherland Dwarfs.

### Science Stage

APRIL 21

The explosive and entertaining CHEMISTRY PLAYGROUND was a SCIENCE STAGE demonstration and presentation that explained and explored the role chemistry plays in almost every aspect of our daily life.

## MAY

### Regarding the Flag

MAY THROUGH LABOUR DAY

Canadian artist Charles Pachter helped us celebrate the Maple Leaf's 20th birthday with this exhibition of 20 of his flag paintings.

### Health Spell

MAY 25

Children's theatre with a message from the Ontario ministries of Health and Northern Affairs. The message – how to live a healthy life – was presented in mime, puppetry and song.

### Science Stage

THROUGH MAY

A series of demonstrations and presentations on Sunday afternoons throughout May. CHEMISTRY MAGIC offered science with a bang. MAGIC IN SCIENCE dealt with the amount of science in magic, and vice-versa. LIFE AND DEATH ON THE HEAD OF A PIN was a presentation about bacteria – both the useful and the harmful varieties.

## JUN

### La Magie Et La Science

JUNE 2

La science est-elle magique? La magie est-elle scientifique?

### Science Stage

THROUGH JUNE

SCIENCE STAGE offered a series of

demonstrations and presentations on Sunday afternoons throughout June, inlcuding WHODUNIT (the role science plays in investigations), SCIENCE OF COOKING, OUR WANDERING CONTINENTS, and SEEING IS BELIEVING?

### Hall of Technology opens

JUNE 26

THE HALL OF TECHNOLOGY became the first new major permanent hall to open at the Centre in 16 years.

# JUL AUG

### Paint the Flag

JULY 1

Easels, paints, flags and artist Charles Pachter were on hand for this Canada Day celebration. Visitors were invited to paint their own vision of the Maple Leaf.

### The Nature of Gas

JULY 2-5

The mystery of natural gas unfolds in a lively blend of theatre, music, comedy and scientific experiments.

### Science Stage

THROUGH JULY

SCIENCE STAGE presented SEEING IS BELIEVING? which took a close look at how we look closely and the perceptions and misconceptions that can result.

### Emett Machines

JULY 1 THROUGH LABOUR DAY

No one is sure exactly what an Emett Machine really does. But they are always fun to watch.

### Science Big Top

JULY 1 THROUGH LABOUR DAY

The Canadian School of Variety Artists supplied the acrobats, jugglers and illusionists and the Science Centre identified some of the scientific principles behind these popular performances in the Great Hall.

# SEP

### Science For Seniors

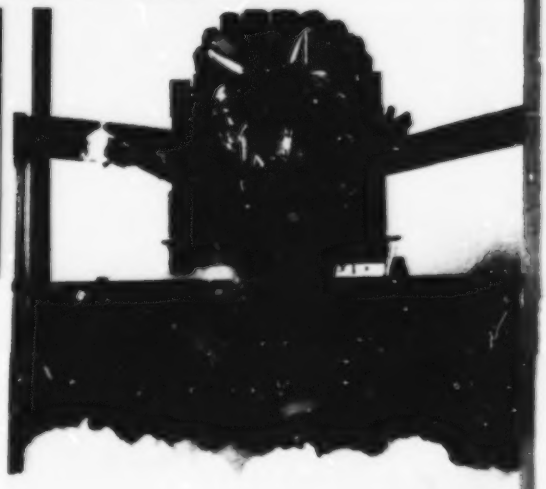
SEPTEMBER THROUGH NOVEMBER

A new, regular series of presentations

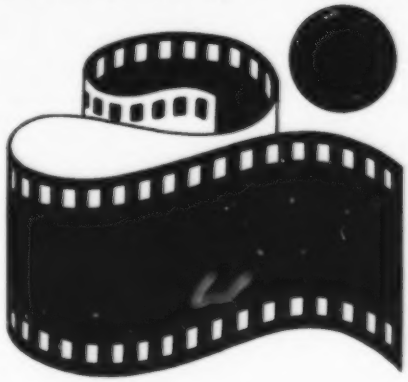
# Calendar

A budding young artist paints the flag on Canada Day.

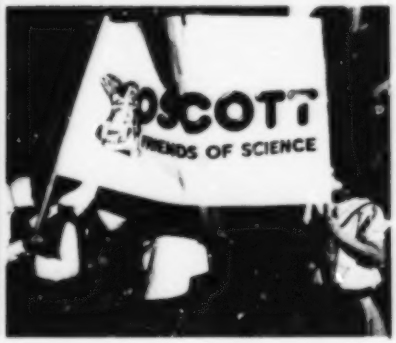
A smiling or frowning Margaret Thatcher — seeing is believing?



The professor and his friend Duran the dinosaur in THE NATURE OF GAS.



Lace-making in the Folk Treasures of Historic Ontario exhibit




500 students got involved in special hands-on science activities on Saturdays as part of the popular OSCOTT series.

The first annual SCIENTIFIC WINE FESTIVAL

on Monday afternoons, covering subjects such as THE HUMAN BODY ADAPTIVE COLOURATION, CRIME DETECTION, FUN WITH PHYSICS and GENETICS.

### Astronomy special

SEPTEMBER 17

British astronomer/author/broadcaster Patrick Moore spent an evening in the auditorium and on the patio demonstrating and discussing stargazing without a telescope.

### Science Behind the Headlines – focus on AIDS

SEPTEMBER 22

The Centre organized and sponsored a well-attended forum on AIDS – Acquired Immune Deficiency Syndrome – featuring such active researchers in the field as Dr. A. Clayton of the Laboratory Centre for Disease Control, immunologist Dr. N. Gilmore of the National Advisory Committee on AIDS, Dr. J. Derrick of the Canadian Red Cross AIDS Project and Prof. T. Alloway, AIDS Committee of Toronto.

### French films

SEPTEMBER 26 – OCTOBER 6

A series of science films in French.

## OCT

### Japanese Film Festival

THROUGH OCTOBER

Twelve of the best films ever made in Japan between 1935 and 1982 were shown by the Ontario Film Institute. It was the first time 10 of the films had been seen in Toronto.

### Scientific Wine Festival

OCTOBER 5 & 6

At this first annual event, wine lovers discovered some of the science behind the ancient art of turning crushed grapes into fine wines.

### Science Stage

OCTOBER 26

WHALES – THE GIANTS OF THE ANIMAL KINGDOM.

### Folk Treasures of Historic Ontario

OCTOBER 16-NOVEMBER 23

Whirligigs and watercolours, wooden toys and hooked rugs, even antique kitchen utensils and quilts were included in this display of more than 200 artifacts collected by the Ontario Heritage Foundation. They were dis-

played in the Communication and Life Galleries.

### Science Behind The Headlines – focus on BLACK BOXES

OCTOBER 20

Dr. Bernard Caiger of the National Research Council of Canada explained how the almost indestructible "black box" recording devices work, and even brought some along – some that were new, and some that had survived plane crashes.

# NOV

### La Magie Et La Science

NOVEMBER 3

La science est-elle magique? La magie est-elle scientifique?

### Titanic

NOVEMBER 9, 10 & 11

A NIGHT TO REMEMBER, the classic film of the doomed luxury liner, The Titanic, was presented to open the display of a hand crafted, 5.5 metre-long, 1:48 scale replica of the famous "unsinkable" ship that sank in 1912.

### Science Stage

NOVEMBER 9

THE SCIENCE OF COOKING.

### Halley's Time Capsule

NOVEMBER 24

People who had seen Halley's Comet on its last visit to Earth were invited to the ceremonial sealing of a time capsule due to be opened the next time Halley's returns. A 34 cent stamp, a Sears Catalogue, a Cabbage Patch Doll and even a can of Coke Classic, were among the items sealed in the plexiglass capsule which remains on display at the bottom of the first escalator.

### Jazz at the Centre

NOVEMBER THROUGH MARCH

Radio Station CJRT presented a series of 10 weekly jazz concerts.

# Calendar

A 5.5 m model of the Titanic "sailed" again.

Herpetologist Jim Lovisek and a flying fox at JUNGLES ALIVE.

CJRT JAZZ

Did you know that Black Box recording devices on airplanes are really orange?

Dr. Helen Hogg offered her memories of Halley's Comet 76 years ago.

Orthopaedic surgeon Dr. Hamilton Hall got things back in perspective delivering three lectures on the human back.

Christmas delights from a Ukrainian kitchen — a prelude to FOOD.

# DEC

## Holiday Food Festival

DECEMBER 19-JANUARY 5

Cooks from many cultures demonstrated their festive meals.

## Jungles Alive!

DECEMBER 26 — JANUARY 5

Jim Lovisek took visitors on a trip through the jungles and introduced them — in person — to some of the animals that live there, from bats and boa constrictors to giant, alligator-eating turtles.

## Crystal close up

DECEMBER THROUGH MARCH

The Moldaver Photomicrography Exhibition offered colourful and compelling photographs of crystals taken through a polarized light microscope.

# JAN

## Barn Raising

JANUARY 9

The nearly extinct tradition of barn-raising was revived when Science Centre staff erected a 1.5 tonne segment of an 1840s barn to serve as one element of the FOOD show.

## Bird tips

JANUARY 11 & 12

Visitors packed the theatre to see nature columnist and artist Barry Kent MacKay showing how to attract song birds to your back yard.

## Science Behind the Headlines — focus on BACK PAIN

JANUARY 19

One of Canada's leading orthopaedic surgeons and author of THE BACK BOOK, Dr. Hamilton Hall, presented a scientific look at the common aching back; plus its many causes, cures and ways to look after it.

# FEB

### Science Stage
FEBRUARY 9
HEALTHY DIETING was a look at the safe, sane and sensible ways to lose weight and at the problems some fad diets can cause.

### Science Behind the Headlines – focus on KILLER STORMS
FEBRUARY 16
A look at violent storms in Ontario, particularly the tornado that hit Barrie in the summer of 1985.

# MAR

### FOOD opens
MARCH 6
Ontario Premier David Peterson and a host of other dignitaries officially opened the FOOD show.

### Spring Break
MARCH 8-16
- The Kitchen in the FOOD show opened with the preparation of squirrel fricasee, rabbit stew and slapjacks – native dishes presented by the authors of The Rural and Native Cookbook.
- ANIMAL GOURMETS featured Jim Lovisek and a variety of animals with unusual diets.
- The Humber Valley Radio Control Flyers Association brought their hobby to the Science Centre and introduced visitors to the joys of flying radio-controlled model aircraft.
- The special FOOD show film was Garlic Is As Good As 10 Mothers.

### Radio Noon
MARCH 14,
Host David Schatzky and the Radio Noon crew set up camp outside the Auditorium and did a special show about food and FOOD.

# Topology

**Here are a variety of problems which can be done with paper, pencil, and a bit of common sense. Some of these problems you have probably seen or done before. Although the questions seem to have no common features, they are all related to a topic in mathematics that you have probably not studied before: Topology**

*Note that some of the problems do not have solutions.*

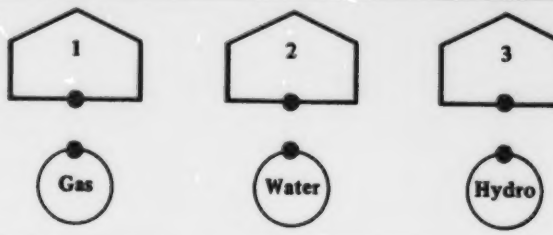
**Problem 1.**

Can you connect each dot to every other dot in such a way that none of the lines cross.

**Problem 2.**

There are three houses on one side of a street. Hydro, water and gas hook-ups are on the other side of the street.

Can you hook up each house with all three utilities without any of the lines crossing.




**Problem 3.**

Can you draw four straight lines to go through all nine dots without lifting your pencil from the paper and without retracing any line.

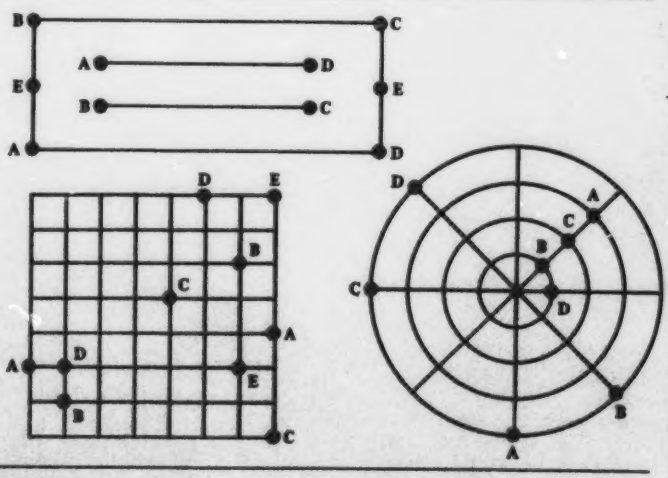
**Problem 4.**

Can you trace the figure on the right without lifting your pencil from the page and without retracing any line.

**Problem 5.**

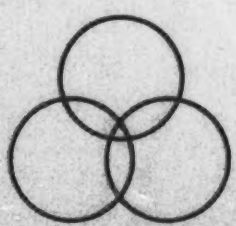
Illustrated below are three diagrams. The problem is to connect each pair of dots, A with A, B with B, and so on, in such a way that the lines you are drawing do not cross.

In the second and third diagrams you must follow along the lines already drawn.




**Problem 6.**

The drawing on the right illustrates the Barromean Rings. This is an old symbol used by a very old Italian family. It is possible to trace this figure without lifting your pencil off the page, without retracing any line, and without crossing over any line at an intersection point.



The alligator-eating turtle, the robot bell polisher, and all the acrobats, jugglers, mimes, painters and magicians – even the bunny rabbits – who wound up at the Centre during fiscal 1985/86 didn't wind up here by accident, you know. It was all planned. Really.

# A YEAR IN THE LIFE

That's because we are firm believers in the famous Six P Formula of business preparedness: Proper Prior Planning Prevents Poor Performance.

Fiscal 1985/86 was a big planning year for us, because on top of the many and varied events and programs we offered the million people who visited us, we also adopted our new Strategic Plan, a five-year plan designed to take us into the 1990's which is described earlier in this report.

Now the best way to evaluate any plan is to see if it gives you enough room to operate — and grow — while still helping you to reach your goals.

Our new Strategic Plan has passed that test by giving us a framework and a focus for our efforts while still allowing us the leeway to adapt and respond to opportunities, discoveries and change; all the scientific and technological marvels, wonders and worries we keep getting presented with.

Those surprises are some of the reasons we developed our new public programming series in fiscal 1985/86 — SCIENCE BEHIND THE HEADLINES. It is designed to offer the public explanations, presentations, demonstrations and a chance to think and talk about new science and science news. SCIENCE BEHIND THE HEADLINES, as you will see elsewhere in this report, is in keeping with our new STRATEGIC PLAN.

But while we pride ourselves on our ability to adapt to the headlines, we are also proud of our ability to deal with the day-to-day operations of the Centre.

We did a lot of that in fiscal 1985/86, too.

About a million visitors toured the centre, including thousands and thousands of preteens and a president.

His Excellency Li Xiannian, President of the People's Republic of China, visited us in July. The Centre is so well-known in China that when plans were being made for his state visit to Canada, he insisted on including us in his itinerary. It's just one more example of the Centre helping spread and enhance Canada's reputation world-wide.

We also planned and prepared a special birthday party for our flag to celebrate the 20 years it has waved. REGARDING THE FLAG was a four-month exhibition of twenty paintings of the flag by Toronto artist Charles Pachter. We also sponsored a paint-a-flag day on Canada Day. Hundreds of visitors took us up on our offer and made use of the paints and easels we supplied to paint their own vision of the Maple Leaf.

While many visitors leave a part of themselves at the Centre, no one has ever left as much as Steve Fonyo. The world famous one-legged athlete who ran all the way across Canada to raise money for cancer research donated the artificial leg he had used during the Ontario portion of his trek.

The science of prosthetics, which was dealt with during a special SCIENCE BEHIND THE HEADLINES presentation while Fonyo was here, is one of the newer fields of research.

But we don't limit ourselves only to the new. Like the proverbial bride, we like a mix of something old, something new and even something borrowed, too.

We borrowed the 5.5 m long, 1:48 scale replica of the famous Titanic as the centrepiece of a display about its being found and photographed. We got the Titanic from the National Museum of Science and Technology. In return, we lent them our Emett things.

The Emett Machines wheeze, whirr, click, clack, blink, bink, boink, bong and bonk as well as spin, sputter and tap, and are among the world's greatest examples of technology that's strictly for fun. No one is really sure what an Emett machine does, let alone how or even why, but they are fascinating to watch.

While the Emett machines' appeal is visual, millions of people prefer scientific results that are potable. The first Annual Scientific Wine Festival was designed for them.

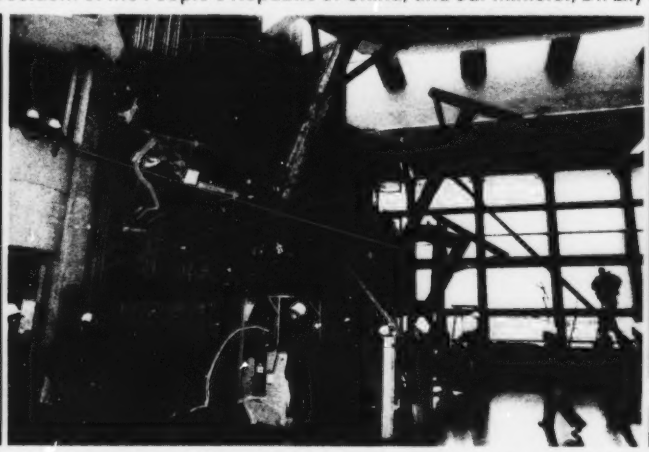
The two-day affair featured a collection of exhibits and experts demonstrating, discussing and explaining the various principles, practices and techniques of wine making, bottling, storing and serving. Visitors could press grapes and view the result through an electron microscope. There were also sessions ranging from how to sniff a cork and read a label — and what each will tell you — to cooking with wine. The festival was, of course, a real corker.

People who compare a visit to the Centre to a visit to the circus often don't realize how right they are. One of our proudest accomplishments is our Science Circus, a collection of more than 40 hands-on exhibits that can be coupled with other travelling exhibits and taken anywhere in the world.

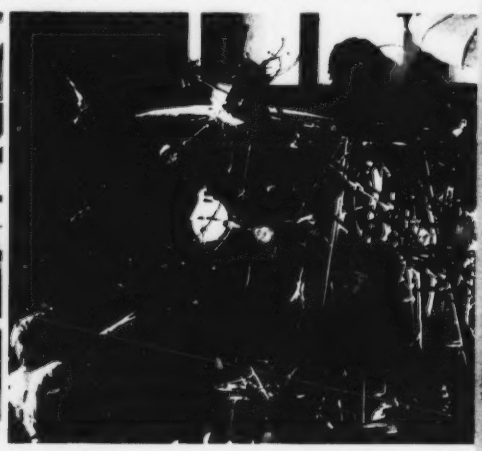
This year our Circus started planning a trip to Malaysia for April of 1986. It will be the feature attraction at the first ASEAN (Association of South East Asian Nations) Science and Technology Week in Kuala Lampur.

Closer to home, the SCIENCE CIRCUS was also the main attraction at the Canada Wide Science Fair in Cornwall, and visited the Skydeck on Hill Island in Ontario's 1000 Islands region. The Circus includes TNT (Travelling New Technology); visitors can get their hands

His Excellency Li Xiannian, President of the People's Republic of China, and our Minister, Dr. Lily Munro.



Reviving an old tradition, raising a barn in the Great Hall.



An Emett in the Great Hall.

on some user-friendly computers and robots, and see for themselves some of the advances being made in robotics, microchips, and biomedical engineering.

The CIRCUS isn't our only show on the road. We have several other travelling attractions. These include:

BODY WORKS. As its name implies, BODY WORKS is a collection of exhibits about the human body. Visitors can test their balance, put together a new face, squint at a skeleton. There are even body models that visitors can take apart.

THE SEEING BRAIN lets you look at some of the secrets of visual perception, including illusion and deception. Dots turn into pictures, birds appear in empty cages and still pictures seen by even more thousands of people.

Another aspect of our taking the Science Centre out to the community is the educational outreach programs, which include SCIENCE ON WHEELS and ROAD SHOWS. Many of the miles they travelled were to rural and Northern Ontario communities, including eight Indian communities north of the 51st parallel.

We also travelled via print, thanks to SCIENCEWORKS, the Centre's best-selling science and activity book for children. During fiscal 1985/86, SCIENCEWORKS, was published in the United States, the United Kingdom and Germany. Work also started on a second book, FOODWORKS, which is based on the FOOD show.

In September, the Education department course each received a full credit from York for Intermediate Science Teaching. Along with York University, we plan to make this an annual event.

We've also increased the amount of professional development programs available in French for Ontario Francophone teachers and schools. And for those teachers planning to bring their classes to the Centre, we've added four more program-related teacher's guides.

The fact that school enrollment rates are decreasing is no reason to reduce the amount of attention and training available to Ontario teachers or students. In spite of the decline, about the same number of students visited us last year as the year before. This means that a larger percentage of Ontario students are getting a chance to enjoy and learn from our

A cheque for $200,000 from Peter Widdrington, chairman of John Labatt Ltd., the private sector donor to FOOD.

School programs use unusual techniques.

Kids in the OSCOTT program have fun discovering.

begin to move — making it hard to believe your own eyes.

Our newest show, OPTICKLES, is a collection of 22 photographs taken by Gera Dillon that look at everyday objects in unusual ways and from unusual angles and perspectives. The show challenges you to figure out if you really always do know what you're looking at.

While all of our other travelling shows are built to travel in large trucks, the SCIENCE SIDE SHOW — which is really a mini SCIENCE CIRCUS — operates out of a van. The van and its two presenters spent a good portion of the year in rural and Northern Ontario livening up local festivals and fairs. During tourist season it spent a lot of time on Highway 401, setting up shop and giving shows at tourist-filled highway rest areas. SCIENCE SIDESHOW attracted numerous kids who made their parents promise to bring them here while in Toronto.

These mobile attractions covered thousands of miles of Ontario roads this year and were

resumed responsibility for the very popular OSCOTT series, which had about 500 students from ages 3 through 14 in fiscal 1985/86 eager to give up a few hours on Saturdays and parts of their vacations to get involved in OSCOTT's special hands-on science activities.

The Education Department started OSCOTT in 1978, but turned it over to the Friends of Science Foundation. The Centre subsequently resumed control of OSCOTT.

For the first time, the Centre also took OSCOTT on the road, thanks to a $55,000 Ontario Bicentennial gift from the Royal Bank of Canada. The money is being used to train OSCOTT presenters across Ontario. The first training session took place in Guelph.

We also kept busy training teachers.

We presented a one-month, 120-hour teacher workshop for York University filled with science teaching tips and demonstration techniques for teachers to take back into their classrooms. The 33 teachers who took the

unique approach to science and education.

We are also continuing to make that approach available to a select cross-section of Ontario high school students at the Centre school. Since we started the school in 1982, 197 students, including some of Ontario's brightest and most adventuresome, have spent a semester here.

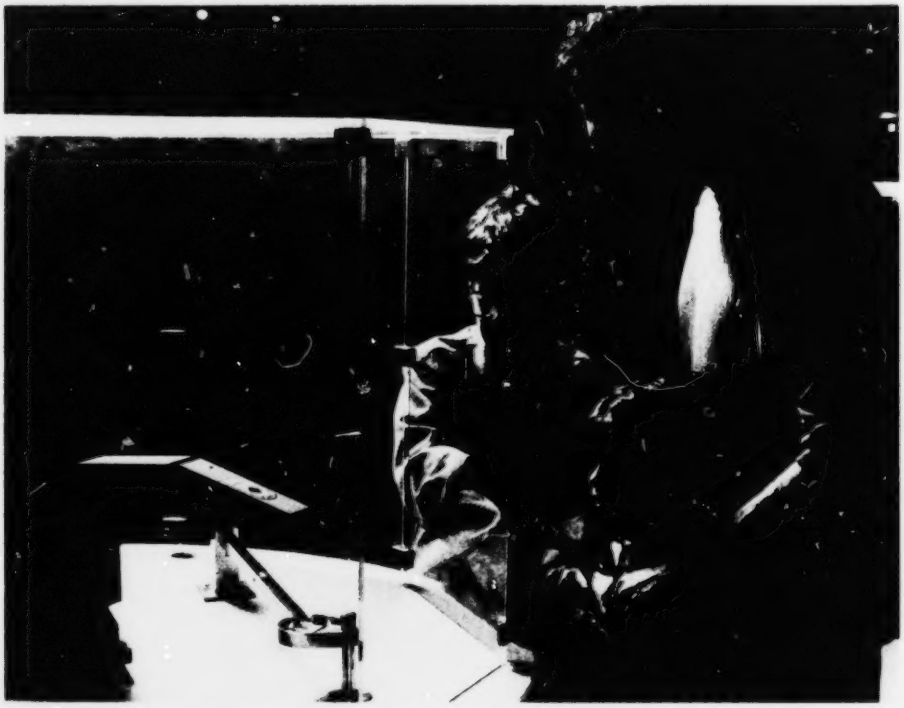
It's fascinating — but not surprising — that more and more of our students are expressing an interest in taking both science and communications in university.

More and more of them are also talking about coming back to the Centre some day as teachers and scientists. That doesn't surprise us the least bit either. In fact, it's all going according to plan.

# NEW HALL OF TECHNOLOGY

Don't let technology scare you.

That, more than anything else, was the message behind the machinery when we opened the Hall of Technology in June, our first new major exhibit hall in 16 years.



**Visitors try their hand at programming industrial robots.**

The Hall is not just a sterile technological show place. It's a people and technology learn and play place.

The Hall is a technology activity centre where visitors can get involved with equipment they've only heard about and discover the part played by technology in their past, present and future. Fifty hands-on exhibits — and one feet-on — span the scientific gap between the wheel and the robot, making frequent stops on the technological path people have followed along the way.

One of the most fascinating stops is a blend of robotic sophistication, bronze-age know-how and high hopes in modern technology as humans and machines work together to cast bells. The highly skilled human partner pours the liquid bronze — heated to 1100°C — into the mold. After it has cooled and set, the painstakingly produced and programmed robot partner is supposed to take over to do the grinding and polishing.

But alas and alack, the Centre's robots — like those in the outside world — still have a few bugs in the system.

Our robot bell grinder is a lot like the robots on our souvenir key chain assembly line. Sometimes they work well and produce thousands of Centre key chains without a flaw; and then sometimes they... well...

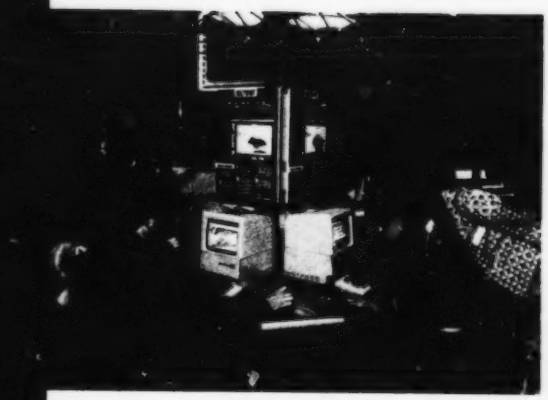
It's when they don't work that we are reminded of two more important messages about technology. It isn't always what it's cracked up to be, and when it does go out of whack, you usually need a human to fix it.

In the foundry, Alf Hepplestone pours liquid bronze into molds for casting bells.

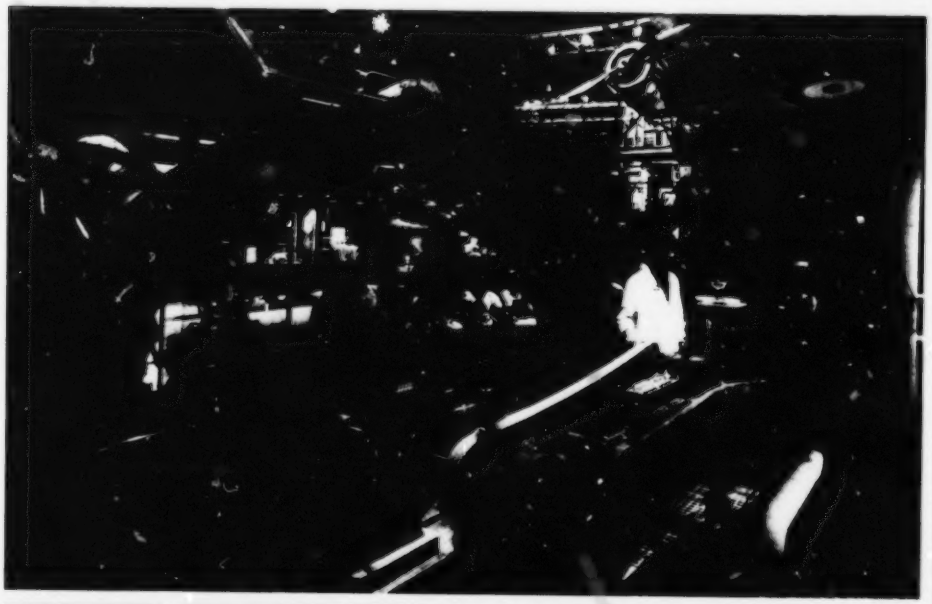
World War I Sopwith Pup pilot Mel Alexander helped open the Hall of Technology.

In the Wood area, a demonstrator makes veneer.

Eighteen prostheses duplicate parts of the human body in our new Bionic Woman.



A 3 m diameter flywheel driven by a giant 98-year-old, 90 horsepower steam engine.



After all, machines can do many of the things a person can do; but not all of them, not by a long shot.

But there's more to technology than watching machines working, and fixing them — or kicking them — when they don't. They're also fun to play and sing and dance with.

In the "Faultless Jamming" booth, you really can just pick up an instrument and play. Or harmonize with others and sound as though you've been playing together for years, thanks to a computer that puts it all together. You can dance before yet another computer, and watch it translate your body movement into a projection of dazzling colours, and make your own patterns using a computer screen as a drawing board. Become a composer in another computer booth.

You can also talk to a computer that will listen to your troubles and offer its services as a psychiatrist.

But computers aren't all we put in the Hall of Technology.

You can also offer your services as a strongman by turning a 4.5 tonne ship's propeller with a flick of your wrist. The fact that it is hooked up so that it has a 290-to-1 gear ratio helps, considerably.

Kids of all ages make sweet music as the player piano shows an early example of key punch cards.

If you think wrist power is impressive, you'll be even more impressed when you see the 3-metre diameter flywheel driven by our giant, 98-year-old, 90-horsepower steam engine. The antique but still functional engine serves as the centre-piece for a number of demonstrations and presentations about some of the many types of energy and the ways that energy is created and utilized.

And if you want to get your feet involved in the Hall, take them to the cantilevered bridge which is attached at only one end — like a diving board. Jump up and down a few times and feel the entire structure bounce.

For that matter, jump into the Hall of Technology itself and find out how science and technology blend with humanity to add bounce to your life.

**With one finger visitors can turn a 4.5 tonne ship's propeller.**

**Jumping on the cantilevered bridge.**




# FILM QUIZ



Answers

1. Hags and Desperate Man and The Guardian Angel
2. Rambo
3. Canada's first film maker, a Manitoba farmer whose movies depicted life on the prairies in the late 1890s.
4. Merle Dressler
5. The Calgary Stampede
6. Lois Maxwell. Miss Moneypenny in the James Bond films.
7. If You Love This Planet, Acid from Heaven, and Acid Rain — Requiem or Recovery
8. Jay Silverheels. Tonto in The Lone Ranger
9. Nanook of the North
10. First Blood, starring Sylvester Stallone as John Rambo.
11. Outrageous!, starring Craig Russell

# *Science* BEHIND THE HEADLINES!

The Honourable Lily Munro accepts runner Steve Fonyo's artificial leg that got him through Ontario in his marathon run across Canada.

If it isn't an event or occurence with a scientific basis or explanation—like a tornado, tidal wave or rocket launching—then it's a new and different scientific theory, development or application.

But headline stories about science don't always explain science.

That's why we started our successful SCIENCE BEHIND THE HEADLINES public programming series. The public is interested in science and when science is in the news, they want to understand it. They want an explanation, and they want it while the story is still newsworthy.

We do more than just explain, however. We are not just a dry museum. We are a place where things — events — happen; a place where people can do more than just passively look and listen. We want them involved, doing and discussing.

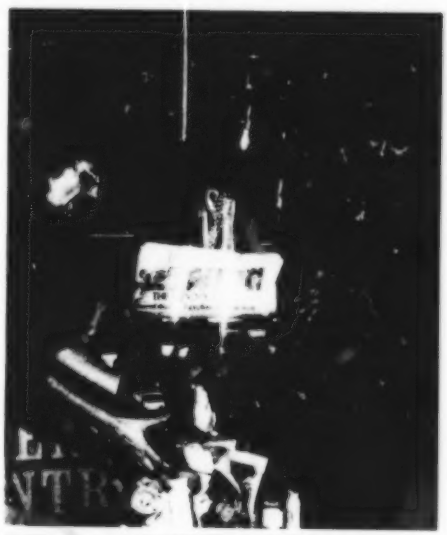
So, when science is in the headlines, we're usually in our auditorium with a presentation, demonstration, lecture, film or a panel of experts ready to discuss it and answer questions from the audience.

For example, a string of airline disasters last year focussed public attention on "black boxes" — the recording devices that often offer the only clues investigators have to find out what caused the accident. So the Centre had Dr. Bernard Caiger of the National Research Council of Canada lead a presentation, demonstration and discussion on how they work. He even brought a few with him that had survived crashes. The boxes, by the way, aren't really black. They're orange.

Not only do we react to headlines and respond to the public's desire for understandable explanations of scientific events and theories, we do it quickly.

The day after an earthquake shook Toronto in January of 1986, renowned Canadian geophysicist and former Centre Director-General Dr. J. Tuzo Wilson was here to discuss the subject with an appreciative, interested and — in some cases — still shaky audience.

Hamilton Hall, the Back Doctor, was supposed to give two presentations to a total of 200 people. But the subject and the author were so popular and newsworthy that we had to move him to a larger room where he gave three presentations to more than 1300 people.



**When Halley's Comet returns in 76 years, our Time Capsule will be opened to see what life in 1985 was all about.**

And when trans-Canada runner Steve Fonyo presented one of his artificial legs to the Centre — the one he used running across Ontario during his famous trek to raise money for cancer research — we invited the public to participate in a seminar on the advances being made in prosthetics.

We presented similar programs dealing with current events ranging from AIDS (Acquired Immune Deficiency Syndrome) and the visit of Halley's Comet to planet Earth to the visit a tornado paid to Barrie, Ontario.

And as far as future programs are concerned …Well, just keep an eye on the headlines. We do.

# QUESTIONAIR

*FOR CENTURIES, PEOPLE HAVE EXPLAINED AIR AS AN OTHERWORLDLY SPIRIT OR SOME MYSTERIOUS BY-PRODUCT OF FIRE. WE KNOW BETTER, RIGHT? AIR-RATE YOURSELF USING THE QUIZ BELOW.*

*Which gas makes up the largest part of air?*

A) Argon
B) Nitrogen
C) Carbon dioxide.

*Answer:* B.
Nitrogen constitutes approximately 78 percent of the air. Oxygen ranks next in abundance at about 21 percent. Next: argon at 0.93 percent, more or less. Carbon dioxide, released by breathing animals, burning hydrocarbons and decaying plants (among other sources), makes up a mere 0.03 percent, or so, of the atmosphere.

*A glass full of air weighs about as much as*

A) A mug of draft.
B) A hole in a donut.
C) The headache pill you will require after this quiz.

*Answer:* C.
An aspirin. Air is made of molecules, just as are rocks and ponds. Gravity gives molecules weight. True, a glass-full of air is not exactly back-breaking. All the air in the world, however, weighs in at more than 4 500 000 000 000 000 tonnes.

*To see a beautiful sunset, you need*

A) An aerosol spray.
B) Instructions on facing west.
C) The right combination of air pressure and humidity.

*Answer:* A.
Particles of dust, smoke and sea salt called aerosols are suspended in the lower atmosphere and scatter sunlight coming from just above and below the horizon. Thus they produce the pleasurable hues of sunset — and sunrise, too.

*Assuming you lead a sedentary life, the air you breathe in a day would fill*

A) A windbag.
B) An auditorium.
C) A bathroom.

*Answer:* C.
An office worker inhales about 11 cubic metres of air in a day — enough to fill an ordinary house's bathroom.

*You don't float on air because*

A) That would be showing off
B) You haven't broadened your being to raise your consciousness.
C) Narcotics laws make it illegal.

*Answer:* B.
A substance such as the helium in balloons floats on air because its molecules are more spread out and thus, less dense than the air itself. As a result, gravity pulls harder on the air above such a substance than on the substance itself. This causes air to rush down around the substance, which rises to fill the space left by the down-rushing air.

# FOOD

## March 6 - November 2, 1986

Science and technology are as at home on your dinner plate as they are in a test tube. That's why we created the FOOD show, which began its seven - month run at the end of fiscal 1986/86.

Partly funded by Ault Dairies, Catelli and Ogilvie — all companies of John Labatt Limited — and by the Ontario Ministry of Agriculture and Food and the Ontario Ministry of Citizenship and Culture, the FOOD show covers everything from the history of food and the science of cooking to grinding your own grain and eating it in free fall. Cooking presentations from different countries and cultures are coupled with demonstrations of the effects of too much sugar and not enough roughage.

Exhibits also let you discover how modern science has made it difficult to figure out just what it is you're actually eating — or even smelling.

Along with the FOOD show, we're producing FOODWORKS, a children's information and activity book, to be published by Kids Can Press. Like most of the exhibits, which will be moved to permanent display positions in the exhibit halls, it will be of interest long after the show ends.

**"The roast beef looks juicy." CHOOSE A MEAL, one of the most popular exhibits in the FOOD show.**

# VISITORS SAY THE DARNDEST THINGS

More than a million-and-a-quarter people visit the Ontario Science Centre each year. They get involved with the exhibits, take part in workshops, watch the demonstrations, wander through the 10 acres of buildings. And they comment on everything. Here are some of the questions and comments you might enjoy.

How many cooks does it take to make pasta? That's Premier David Peterson in the centre, with Agriculture and Food Minister Jack Riddell at far left.

An average Canadian eats 19 shopping carts of food per year.

*The Science Centre is a large complex. Here are some questions asked at the information booth in the entrance lobby.*

"How do I get to the Science Centre?"

"Where do I find something on science?"

"Is it worth the money?"

With respect to family admission price:

"What do you mean 25 is not considered a family? We're close!"

"Do we have to write on the trees?" (In actual fact, the initials on the trees were vandalism — something the Science Centre does not encourage.)

*Some visitors are so enthusiastic about the Science Centre that almost nothing can keep them away.*

A phone call: "I'm coming to the Science Centre with my two young children and I'm expecting a third child any day now. Do you have the facilities should I go into labour?"

*During a typical summer's day, at least 7000 people will pass the central information booth an average of three times each, as they visit the various exhibit halls. Inevitably, some of these keen explorers lose their companions. The staff sitting at the booth get some curious clues to the identity of the lost persons.*

"Did you see two kids walk by here a while ago?"

"Have you seen my son? He's wearing blue jeans."

*Dads have a real problem...*

"I've lost my daddy. He's wearing red underwear."

"I've lost my daddy. He has green hair." (It did have a greenish tinge!)

*Animals that live in and around the Science Centre get their share of attention.*

Foreign visitors pointing to black squirrels: "Look! Canadian skunks don't have white stripes."

Visitor pointing to racoon in a tree: "See the koala bear!"

Small child watching staff member distribute seed: "How long does it take for the little [illegible] come up?"

About the fish in Environment Earth: "Do you use genetic engineering to get them to swim like that?" (They were floating upside down.)

# IN GOOD REPAIR

If you think of the Science Centre as a large mosaic made up of many different pieces of brightly coloured tiles, think of the Exhibit Maintenance Department as the sticky stuff that fills in the cracks and holds it all together.

After all, in the Science Centre a space suit can share floor space with a stone-age grinding wheel and a hydroponic lettuce garden, and while each may have been developed by a different department, all three have to be maintained by Exhibit Maintenance.

Even turning one of the Centre's 800-plus exhibits on or off can be a long, involved, complicated and time-consuming process. While most exhibits need merely to be switched on or off, others, like the Coloured Flames in the Chemical Energy area, have to be shut down and cleaned every night. Then some of the parts have to be soaked in a special cleaning solution. The next morning it all must be reassembled and ignited.

Maintenance duties at the Centre range from the mechanical and electrical to the agricultural and animal.

Model trains must be rebuilt, lightbulbs changed, ropes must be braided, and baby chicks helped to hatch. Snakes, rats, frogs, guinea pigs and lizards as well as tanks full of prawns, catfish and trout must all be tended.

Organ keys must be changed, bicycle seats replaced, water pumps — both ancient and modern — taken apart, cleaned and reassembled on a regular basis; chemicals must be mixed and.....questions must be answered, millions of questions.

People visiting the Centre consider every Centre employee to be a source — a goldmine — of information. Since the Exhibit Maintenance Department staff regularly check all the exhibits — and work on them when necessary — while the Science Centre is open to the public, they often answer as many questions about the exhibits as the people who created and designed them in the first place.

# ACKNOWLEDGEMENTS

Public and private support of the Ontario Science Centre continued to grow during fiscal 1985/86. We would like to acknowledge the generous support of the following:

Aberfoyle Fisheries Limited
adidas Canada Limited
Agriculture Canada, Ottawa
American Standard
Applied Hydroponics Incorporated, Montreal
ASEA Incorporated
Auburne University, Alabama
Ault Dairies
Black Clawson Kennedy Limited
Borg Warner (Canada) Limited
British Columbia Provincial Museum
Camco
Canada Packers Limited
Canada Steamship Lines Incorporated
Catelli
CBC Radio
Club Coffee Companies
Coin Acceptors of Canada
Cooper Roller Bearings Canada Limited
Culligan of Canada Limited
CP Air
Cyanamid Canada Incorporated
Department of Fisheries and Oceans, Prince Edward Island
Dow Corning Canada Incorporated
Ernst Leitz Canada Limited
Epcot Center, Florida
Hershey Canada Incorporated
Humber College of Applied Arts
Infomart
International Development Research Centre, Ottawa
Kellogg Salada Canada Incorporated
Kubota Limited, Japan
Kubota Tractor Canada Limited
John Labatt Limited
Laura Secord Limited
Living Lettuce, Grand Valley
Loblaw Companies Limited
Massey-Ferguson Industries Limited
McDonald's Restaurants of Canada Limited
Melitta Canada Incorporated
Metro Toronto Zoo
Ministry of Agriculture, Fisheries & Food, England
Multi Restaurants
National Geographic Society, Washington, D.C.
National Maritime Museum, England
Ogilvie Mills
Ontario Agriculture Museum, Milton
Ontario Ministry of Citizenship and Culture
Ontario Ministry of Energy
Ontario Ministry of Health
Ontario Hydro
Ontario Lottery Corporation
Ontario Ministry of Natural Resources
Ontario Paper Company
Ontario Pork Producers' Marketing Board
Ostred Sea Farms, Nova Scotia
Pennsylvania Fish Commission
P.L. Light Systems Canada Limited
Roland of Canada
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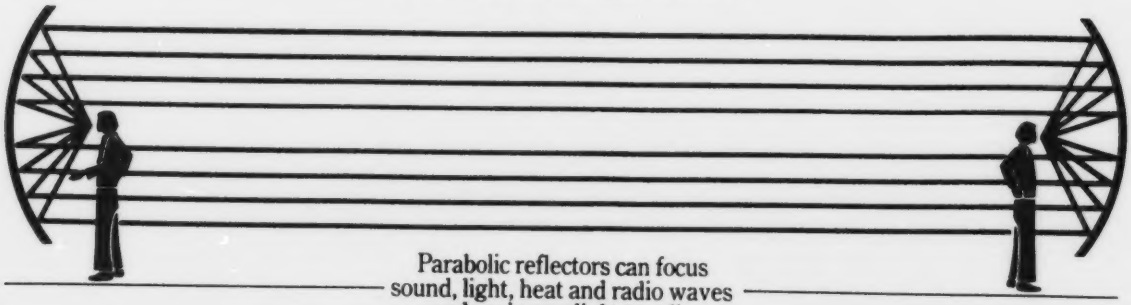
Royal Canadian Mounted Police
Royal Ontario Museum
Science City
Scott Museum, Uxbridge
Seafarm Ventures, Nova Scotia
Seiko Time Canada
Dr. Morton Shulman
Singer Sewing Machine Company
SKF
Skil Canada Limited
Spar Aerospace Limited
Stelco Incorporated
Tea Council of Canada
Tetrapak Incorporated
Mr. Stanley Todorow
Toronto General Hospital
Trojan Technologies Incorporated, London, Ontario
University of Arizona
University of Guelph
University of Toronto
Wilson Sports Equipment Canada Limited

These are parabolic reflectors.
The special property of this kind
of reflector is that all sound
waves originating at the focal point
will be reflected so that they travel
in mutually parallel paths. Sound
waves coming from one disc reach the
other disc too faint to be heard
by an unaided ear. However, the
parabolic shape of the second
reflector also converges all the
incoming sound at its focus, forming
a stronger sound that can be heard.



Parabolic reflectors can focus
sound, light, heat and radio waves
such as in spotlights, radio
telescopes and electric heaters.
What other applications
can you think of?

The Ontario Science Centre
is an Agency of the Ontario Ministry
of Citizenship and Culture.

# Financial Statements

*for the year ended March 31, 1986*

The Centennial
Centre of
Science and
Technology

**The Centennial Centre of Science and Technology**

**Office of the Provincial Auditor**

Parliament Buildings
Queen's Park
Toronto, Ontario
M7A 1A2

*To the Board of Trustees and to the Minister of Citizenship and Culture.*

I have examined the balance sheet of The Centennial Centre of Science and Technology as at March 31, 1986 and the statements of operations and retained income and special purposes fund for the year then ended. My examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as I considered necessary in the circumstances.

Donations, by their nature, are not susceptible to complete audit verification. Accordingly our verification of donation receipts was limited to a comparison of recorded receipts with bank deposits.

In my opinion, except for the effect of any adjustments which might have been required had I been able to completely verify donation receipts, these financial statements present fairly the financial position of the Centre as at March 31, 1986 and the results of its operations for the year then ended in accordance with the basis of accounting described in note 1 to the financial statements applied on a basis consistent with that of the preceding year.

A report on the audit has been made to the Board and to the Minister.

J.F. Otterman

Toronto, Ontario,
August 1, 1986.

J.F. Otterman, F.C.A.,
Assistant Provincial Auditor.

## Balance Sheet
*as at March 31, 1986*

**The Centennial Centre of Science and Technology**

| **Assets** | **1986** | 1985 |
|---|---|---|
| **Operating** | **$** | $ |
| Cash | **5,275** | 4,450 |
| Accounts receivable – trade and other | **13,554** | 55,310 |
| Due from Province of Ontario | **262,298** | – |
| Prepaid expenses | **17,114** | 27,196 |
| Inventory of general stores and small tools (note 1(c)) | **95,331** | 77,057 |
| Fixed assets, at nominal value (notes 1(d), 2 and 3) | **1** | 1 |
| | **393,573** | 164,014 |
| **Special Purposes Fund** | | |
| Cash and short term deposits | **1,253,003** | 563,125 |
| | **1,646,576** | 727,139 |

| **Liabilities, Equity and Fund Balance** | | |
|---|---|---|
| **Operating** | | |
| Accounts payable and accrued liabilities (note 1(a)) | **298,265** | 35,539 |
| Due to Province of Ontario | **–** | 51,441 |
| | **298,265** | 86,980 |
| Retained income | **95,308** | 77,034 |
| | **393,573** | 164,014 |
| **Special Purposes Fund Balance** | **1,253,003** | 563,125 |
| | **1,646,576** | 727,139 |

See accompanying notes to financial statements.

On behalf of the Board of Trustees:

Chairman

Member

## Statement of Operations and Retained Income

*for the year ended March 31, 1986*

**The Centennial Centre of Science and Technology**

| | 1986 | 1985 |
|---|---|---|
| **Income** | **$** | **$** |
| Fees – entrance | **1,643,488** | 1,893,640 |
| – parking | **171,269** | 171,209 |
| Concessions (note 6) | **21,843** | 287,522 |
| Other | **16,339** | 38,070 |
| | **1,852,939** | 2,390,441 |
| Lottario grant | | |
| – new exhibits and FOOD show | **754,628** | 356,128 |
| – Travelling Science Circus | **–** | 485,072 |
| Special grants | **–** | 78,000 |
| Net funds provided by Province of Ontario | **9,015,612** | 7,777,982 |
| | **11,623,179** | 11,087,623 |
| **Expenditure** (note 4) | | |
| Salaries and employee benefits | **7,919,836** | 7,164,437 |
| Materials – maintenance of exhibits | **989,467** | 614,602 |
| – new exhibits (notes 1(d) and 2) | **558,293** | 494,376 |
| – Travelling Science Circus | **–** | 485,072 |
| Cleaning | **468,000** | 450,514 |
| Supplies and publications | **428,753** | 470,788 |
| Advertising and promotion | **330,383** | 442,336 |
| Machinery, furniture and equipment (notes 1(d) and 2) | **251,971** | 202,312 |
| Travel | **109,837** | 181,261 |
| Demonstration and instruction | **94,291** | 108,215 |
| Telephone and telegraph | **71,497** | 91,333 |
| Postage, freight and insurance | **60,043** | 90,385 |
| Periodicals and books | **29,730** | 29,947 |
| Film rentals and purchases | **26,317** | 25,319 |
| Consulting services | **18,127** | 22,305 |
| Equipment rentals and repairs | **17,842** | 40,917 |
| Other | **230,518** | 166,379 |
| | **11,604,905** | 11,080,498 |
| **Excess of income over expenditure** | **18,274** | 7,125 |
| **Retained income, beginning of year** | **77,034** | 69,909 |
| **Retained income, end of year** | **95,308** | 77,034 |

See accompanying notes to financial statements.

## Statement of Special Purposes Fund
*for the year ended March 31, 1986*

**The Centennial Centre of Science and Technology**

| | Restricted | Unrestricted | 1986 Total | 1985 Total |
|---|---|---|---|---|
| **Income** | $ | $ | $ | $ |
| Touring activities | – | 414,208 | **414,208** | 35,000 |
| Ancillary Income (note 6) | – | 259,819 | **259,819** | – |
| Donations | 101,178 | 2,710 | **103,888** | 81,202 |
| Interest earned | – | 72,932 | **72,932** | 47,263 |
| Sales – Exhibits | 31,500 | 10,000 | **41,500** | 7,793 |
| – Publications | – | 21,282 | **21,282** | 32,233 |
| Supported activities | – | 17,814 | **17,814** | – |
| Royalties | – | 4,016 | **4,016** | 5,368 |
| Other | – | 22,794 | **22,794** | – |
| **Total income** | 132,678 | 825,575 | **958,253** | 208,859 |
| **Expenditure** | | | | |
| Touring activities | 67,497 | 109,349 | **176,846** | 26,149 |
| Supported activities | 400 | 41,867 | **42,267** | 31,074 |
| Sales – Publications | 31,298 | 8,931 | **40,229** | 24,355 |
| – Exhibits | – | 1,434 | **1,434** | 17,345 |
| Other | – | 7,599 | **7,599** | – |
| **Total expenditure** | 99,195 | 169,180 | **268,375** | 98,923 |
| **Excess of income over expenditure** | 33,483 | 656,395 | **689,878** | 109,936 |
| **Balances, beginning of year** | 236,862 | 326,263 | **563,125** | 453,189 |
| **Inter-fund transfers** | (56,071) | 56,071 | **–** | – |
| **Balances, end of year** | 214,274 | 1,038,729 | **1,253,003** | 563,125 |

See accompanying notes to financial statements.

# Notes to Financial Statements
*March 31, 1986*

**The Centennial Centre of Science and Technology**

## 1. Summary of Significant Accounting Policies

The financial statements of The Centennial Centre of Science and Technology (the Centre) present the financial position and results of activities within the framework of the accounting policies summarized below:

**(a) Expenditure**
Expenditure is reported on the accrual basis of accounting modified to allow an additional twenty-four days to pay for goods and services acquired in the fiscal year just ended. Special purposes fund expenditures are recorded as paid.

**(b) Income**
Income from operations is reported on the accrual basis of accounting. Special purposes fund income is recorded as received with the exception of interest income which is recorded as earned.

**(c) Inventory**
Inventory is valued at the lower of cost or replacement cost, determined on the first in, first out basis.

**(d) Fixed assets**
Fixed assets, other than buildings, are acquired through purchases or donations. Fixed assets purchased are charged to expenditures in the year of acquisition. Fixed assets are reported on the balance sheet at a nominal value of $1.

**(e) Special purposes fund**
Resources in the special purposes fund are accounted for in separate funds in accordance with the objectives specified by the contributors or in accordance with the directives issued by the Board of Trustees. For financial reporting purposes, the resources are classified as follows:

(i) Restricted: Funds restricted by the contributors or Board of Trustees for special purpose expenditures;

(ii) Unrestricted: Unrestricted donations, ancillary income and interest income earned from restricted and unrestricted funds.

## 2. Fixed Assets, Other Than Building

The total accumulated costs of fixed assets, less dispositions as at March 31 are as follows:

| | **1986** | 1985 |
|---|---|---|
| | **$** | $ |
| Exhibits (including labour, material and allocated overhead) | **13,533,769** | 11,953,879 |
| Machinery, furniture and equipment | **2,302,140** | 2,102,207 |
| Artifacts | **395,532** | 395,532 |
| Donated items (at appraised value) | **373,276** | 151,526 |
| | **16,604,717** | 14,603,144 |

The Centennial Centre of Science and Technology

### 3. Fixed Assets—Building

Capital costs provided by the Ontario Government in the current year amounting to $487,800 (1985—$996,400) have not been included in the accompanying balance sheet. The accumulated costs of facilities provided by the Governments of Canada and Ontario amounted to $32,129,650 (1985—$31,641,850) as at March 31, 1986.

The land on which the Centre is located is leased for $1 per annum on a 99 year agreement which commenced July 1, 1965.

### 4. Additional Expenditure

Certain additional operating expenses are being met on behalf of the Centre by Ontario Government ministries and are not included in the statement of operations and retained income.

According to the records of these ministries, these expenses consist of:

| | **1986** | 1985 |
|---|---|---|
| | **$** | $ |
| Building maintenance | **1,678,700** | 1,747,500 |
| Grants in lieu of municipal taxes | **64,004** | 59,932 |
| Rental of off-site facilities | **31,392** | 29,845 |
| Exchange premiums | **16,444** | 32,652 |
| | **1,790,540** | 1,869,929 |

### 5. Remuneration Paid to the Office of the Chairman

Remuneration paid to the Office of the Chairman amounted to $6,750 for the year ended March 31, 1986 (1985—$8,742).

### 6. Board of Trustee Resolution

On June 28, 1985 the Executive Committee of the Board of Trustees passed a resolution which authorized management to retain ancillary income as part of the Unrestricted Special Purpose Fund. Ancillary income is defined as moneys received as a result of agreements entered into by the Board of Trustees. Concessions and rental income totalling $259,819 was retained in the Unrestricted Fund during the year as a result of this resolution.

### 7. Comparative Figures

Comparative figures have been reclassified where necessary to conform with the 1986 presentation.